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### Search Results -

Terms	Documents
L2 and (suppress\$ or inhibit\$ or repress\$)	56

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<u>L3</u>	L2 and (suppress\$ or inhibit\$ or repress\$)	56	<u>L3</u>
<u>L2</u>	plzf and (androgen or estrogen) and receptor	56	<u>L2</u>
<u>L1</u>	plzf same (androgen or estrogen)	9	<u>L1</u>

END OF SEARCH HISTORY

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? b biotech biochem medicine

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? s plzf (s) (estrogen or androgen) (s) receptor?

Processing

1978 PLZF

613416 ESTROGEN

253700 ANDROGEN

6112506 RECEPTOR?

S1 55 S PLZF (S) (ESTROGEN OR ANDROGEN) (S) RECEPTOR?

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Set	Items	Description
S1	55	S PLZF (S) (ESTROGEN OR ANDROGEN) (S) RECEPTOR?
S2	22	RD (unique items)

; t /3,k/all

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2/3,K/1 (Item 1 from file: 5) Links

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Biosis Previews(R)

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0016018316 Biosis No.: 200600363711

**PLZF regulates pbx1 transcription and Pbx1-HoxC8 complex leads to androgen-independent prostate cancer**



## **proliferation**

**Author:** Kikugawa Tadahiko; Kinugasa Yumi; Shiraishi Ken; Nanba Daisuke; Nakashiro Koh-ichi; Tanji Nozomu; Yokoyama Masayoshi; Higashiyama Shigeki (Reprint)

**Author Address:** Ehime Univ, Sch Med, Dept Biochem and Mol Genet, Toon, Ehime 7910295, Japan \*\*Japan

**Author E-mail Address:** shigeki@m.ehime-u.ac.jp

**Journal:** Prostate 66 ( 10 ): p 1092-1099 JUL 1 2006 2006

**ISSN:** 0270-4137

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Abstract:** BACKGROUND. Promyelocytic leukemia zinc finger (**PLZF**) protein, a transcriptional repressor and negative regulator of the cell cycle, has been characterized as a prostatic **androgen**-responsive gene. DU145 cells show **androgen**-independent growth and lack **PLZF** gene expression. METHODS. We analyzed **PLZF**-regulating genes by DNA microarray using DU145 cells infected with LacZ- or **PLZF**-carrying adenoviruses. RESULTS. DNA microarray revealed that Pbx1 is a prominent suppressed gene in **PLZF**-overexpressing DU145 cells. **Androgen receptor** (AR)-expressing DU145 cells recovered **androgen**-dependent **PLZF** expression and subsequent repression of Pbx1 expression. Immunoprecipitation of Pbx1 in DU145 cells revealed a... ..growth. Double knockdown of both Pbx1 and HoxC8 suppressed cell growth much more significantly. CONCLUSIONS. **Androgen**-independent cell line DU145 cells lack **PLZF** gene expression, resulting in the upregulation of Pbx1 and HoxC8 expression. The Pbx1-HoxC8 heterocomplex may lead to **androgen**-independent growth in prostate cancer.

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0015837623 Biosis No.: 200600183018

**Genetic pathways in therapy-related leukemia: FHL2 cooperates with del(5q).**

**Author:** Qian Zhijian (Reprint); Mao Liqun; Lebeau Michelle

**Author Address:** Univ Chicago, Dept Med, Hematol Oncol Sect, Chicago, IL 60637 USA\*\*USA

**Journal:** Blood 106 ( 11, Part 1 ): p 192A NOV 16 2005 2005

**Conference/Meeting:** 47th Annual Meeting of the American-Society-of-Hematology Atlanta, GA, USA  
December 10 -13, 2005; 20051210

**Sponsor:** Amer Soc Hematol

**ISSN:** 0006-4971

**Document Type:** Meeting; Meeting Abstract

**Record Type:** Abstract

**Language:** English

**Abstract:** ...and apoptosis in a tissue-specific fashion. Interacting partners of FHL2 include WT1, b-catenin, **PLZF**, and the **androgen receptor**. In subsequent studies, we determined that hematopoietic cells express a novel isoform of FHL2 (termed...

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0015394690 Biosis No.: 200510089190

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF (vol 12, pg 452, 2005)**

**Author:** Buluwela L (Reprint); Pike J; Mazhar D; Kamalati T; Hart S M; Al-Jehani R; Yahaya H; Patel N; Sarwarl N; Heathcote D A; Schwickerath O; Phoenix F; Hill R; Aboagye E; Shousha S; Waxman J; Lemoine N R; Zelent A; Coombes R C; Ali S

**Author Address:** Univ London Imperial Coll Sci Technol and Med, Dept Histopathol, London, UK \*\*UK

**Journal:** Gene Therapy 12 ( 10 ): p 862 MAY 05 2005

**ISSN:** 0969-7128

**Document Type:** Article; Errata

**Record Type:** Citation

**Language:** English

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF (vol 12, pg 452, 2005)**

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0015283652 Biosis No.: 200500190717

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF**

**Author:** Buluwela L (Reprint); Pike J; Mazhar D; Kamalati T; Hart S M; Al-Jehani R; Yahaya H; Patel N; Sarwarl N; Heathcote D A; Schwickerath O; Phoenix F; Hill R; Aboagye E; Shousha S; Waxman J; Lemoine N R; Zelent A; Coombes R C; Ali S

**Author Address:** Dept Canc Med, Univ London Imperial Coll Sci Technol and Med, Du Cane Rd, London, W12 0NN, UK\*\*UK

**Journal:** Gene Therapy 12 ( 5 ): p 452-460 March 2005 2005

**Medium:** print

**ISSN:** 0969-7128 (ISSN print)

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF**

**Abstract:** Estrogen receptor alpha (ERalpha) is a ligand-inducible transcription factor that acts to regulate gene expression by binding to palindromic DNA sequence, known as the estrogen response element, in promoters of estrogen-regulated genes. In breast cancer ERalpha plays a central role, where estrogen-regulated gene expression leads to tumor initiation, growth and survival. As an approach to silencing estrogen-regulated genes, we have studied the activities of a fusion protein between ERalpha and the promyelocytic leukemia zinc-finger ( PLZF) protein, a transcriptional repressor that acts through chromatin remodeling. To do this, we have developed lines from the estrogen-responsive MCF-7 breast cancer cell line in which the expression of the fusion protein PLZF-ERalpha is conditionally regulated by tetracycline and shows that these feature long-term silencing of the expression of several well-characterized estrogen-regulated genes, namely pS2, cathepsin-D and the progesterone receptor. However, the estrogen-regulated growth of these cells is not inhibited unless PLZF-ERalpha expression is induced, an observation that we have confirmed both in vitro and in vivo. Taken together, these results show that PLZF-ERalpha is a potent repressor of estrogen-regulated gene expression and could be useful in distinguishing estrogen-regulated genes required for the growth of breast cancer cells.

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0015126384 **Biosis No.:** 200500033449

**Silencing of androgen-regulated genes using a fusion of AR with the PLZF transcriptional repressor**

**Author:** Pike Joanna; Holmes David; Kamalati Tahereh; Davies Derek; Tolhurst Robert; Mazhar Danish; Fishpool Sam; Al-Jehani Rajai; Waxman Jonathan; Zelent Arthur; Lemoine Nicholas R; Ali Simak (Reprint); Buluwela Laki

**Author Address:** Dept Canc Med, Univ London Imperial Coll Sci Technol and Med, Du Cane Rd, London, W12 0NN, UK\*\*UK

**Author E-mail Address:** [simak.ali@imperial.ac.uk](mailto:simak.ali@imperial.ac.uk); [l.buluwela@imperial.ac.uk](mailto:l.buluwela@imperial.ac.uk)

**Journal:** Oncogene 23 ( 45 ): p 7561-7570 September 30, 2004 2004

**Medium:** print

**ISSN:** 0950-9232 (ISSN print)

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Abstract:** The **androgen receptor** (AR) is a member of the nuclear **receptor** superfamily of ligand-activated transcription factors and plays a key role in the development and... ..regulated genes, based on the properties of the transcriptional repressor promyelocytic leukemia zinc-finger protein ( **PLZF**). In order to do this, we have made a fusion protein between **PLZF** and AR, named **PLZF-AR**, and show that **PLZF-AR** is able to bring about silencing of genomically encoded AR-regulated genes and inhibit the **androgen**-regulated growth of LNCaP prostate cancer cells. Together, our results show that this strategy is...

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0015080090 Biosis No.: 200400461319

**Identification and characterization of PLZF as a prostatic androgen-responsive gene**

**Author:** Jiang Feng; Wang Zhou (Reprint)

**Author Address:** Feinberg Sch MedDept Urol, Northwestern Univ, Tarry 11-715, Chicago, IL, 60611, USA\*\*USA

**Author E-mail Address:** wangz@northwestern.edu

**Journal:** Prostate 59 ( 4 ): p 426-435 June 1, 2004 2004

**Medium:** print

**ISSN:** 0270-4137 (ISSN print)

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Abstract:** BACKGROUND. Promyelocytic leukemia zinc finger protein (**PLZF**) was initially identified by virtue of its fusion with RARalpha as a result of a ... ..17) chromosomal translocation that occurs in a small subset of acute promyelocytic leukemia (APL) patients. **PLZF** has been reported to have pro-apoptotic and anti-proliferative activity both in vivo and in vitro. METHODS. Using a modified subtractive hybridization, we identified **PLZF** as an **androgen**-responsive gene in the rat ventral prostate. Northern blot and Western blot were used to characterize the regulation of **PLZF** by androgens in LNCaP cells. Stable transfections of **PLZF** in LNCaP cells were performed to assay the effect of **PLZF** overexpression on LNCaP cell proliferation. RESULTS. **PLZF** mRNA was transiently up-regulated by androgens in the regressed ventral prostate of castrated adult rat. **PLZF** was also up-regulated by androgens, at both mRNA and protein levels, in the **androgen**-responsive human prostate cancer cell line LNCaP. **Androgen** induction of **PLZF** mRNA was not inhibited by protein synthesis inhibitor cycloheximide but inhibited by **androgen receptor** antagonist bicalutamide, indicating that **PLZF** is a direct **androgen**-responsive gene. To study the functions of **PLZF** in **androgen** action, LNCaP sublines stably overexpressing **PLZF** were generated. **PLZF** overexpression inhibited LNCaP proliferation either in the presence or absence of **androgen**, which is consistent with the reported anti-proliferative activity of **PLZF**. CONCLUSIONS. The above observations indicate that **PLZF** is an **androgen**-responsive gene with anti-proliferative activity in prostate cancer cells. Copyright 2003 Wiley-Liss, Inc.

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0013351691 Biosis No.: 200100523530

**Estrogen-dependent E2a/Pbx1 myeloid cell lines exhibit conditional differentiation that can be arrested by other leukemic oncoproteins**

**Author:** Sykes David B (Reprint); Kamps Mark P

**Author Address:** Department of Molecular Pathology, University of California San Diego School of Medicine, 9500 Gilman Dr, La Jolla, CA, 92093-0612, USA\*\*USA

**Journal:** Blood 98 ( 8 ): p 2308-2318 October 15, 2001 2001

**Medium:** print

**ISSN:** 0006-4971

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

**Abstract:** ...The cell lines were established by conditional immortalization of primary murine marrow progenitors with an **estrogen**-regulated E2a/Pbx1-**estrogen receptor** fusion protein. Clones were identified that proliferated as immortalized blasts in the presence of **estrogen**, and that exhibited granulocytic, monocytic, or bipotential (granulocytic and monocytic) differentiation on **estrogen** withdrawal. Differentiation was normal and terminal as evidenced by morphology, cell surface markers, gene expression... ..differentiation of the cells could be arrested by heterologous oncoproteins including AML1/ETO, PML/RARalpha, **PLZF**/RARalpha, Nup98/HoxA9, and other Hox proteins. Furthermore, the study examined the effects of cooperating...

2/3,K/8 (Item 1 from file: 34) [Links](#)

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13000927 **Genuine Article#:** 839DZ **No. References:** 68

**Cross talk between retinoic acid signaling and transcription factor GATA-2**

**Author:** Tsuzuki S; Kitajima K; Nakano T; Glasow A; Zelent A; Enver T (REPRINT)

**Corporate Source:** John Radcliffe Hosp,MRC, MHU, WIMM,Oxford OX3 9DU//England/ (REPRINT); John Radcliffe Hosp,MRC, MHU, WIMM,Oxford OX3 9DU//England/; Inst Canc Res,Sect Gene Funct & Regulat,London SW3 6JB//England/; Inst Canc Res,Leukaemia Res Fund Ctr,London SW3 6JB//England/; Aichi Canc Ctr,Res Inst, Div Mol Med,Nagoya/Aichi 4648681/Japan/; Osaka Univ,Microbial Dis Res Inst, Dept Mol Cell Biol,Suita/Osaka 5650871/Japan/ ( tenver@gwmail.jr2.ox.ac.uk )

**Journal:** MOLECULAR AND CELLULAR BIOLOGY , 2004 , V 24 , N15 ( AUG ) , P 6824-6836

**ISSN:** 0270-7306 **Publication date:** 20040800

**Publisher:** AMER SOC MICROBIOLOGY , 1752 N ST NW, WASHINGTON, DC 20036-2904 USA

**Language:** English **Document Type:** ARTICLE ( ABSTRACT AVAILABLE )

**Identifiers--** ...ACUTE PROMYELOCYTIC LEUKEMIA; **RECEPTOR**-ALPHA ONCOPROTEIN; EMBRYONIC STEM-CELLS; **PLZF**-RAR-ALPHA; SELF-RENEWAL; DNA-BINDING; HEMATOPOIETIC-CELLS; **ESTROGEN-RECEPTOR**; GENE-EXPRESSION; ZINC-FINGER



2/3,K/9 (Item 2 from file: 34) [Links](#)

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[SCIENCEDIRECT](#)

SciSearch(R) Cited Ref Sci

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12798163 **Genuine Article#:** 821DT **No. References:** 35

**Reduced intranuclear mobility of APL fusion proteins accompanies their mislocalization and results in sequestration and decreased mobility of retinoid X receptor alpha**

**Author:** Dong S; Stenoien DL; Qiu JH; Mancini MA; Tweardy DJ (REPRINT)

**Corporate Source:** Baylor Coll Med,Dept Med, Infect Dis Sect,1 Baylor Pl,BCM 286,Room

N1319/Houston//TX/77030 (REPRINT); Baylor Coll Med,Dept Med, Infect Dis Sect,Houston//TX/77030; Baylor Coll Med,Dept Mol & Cellular Biol,Houston//TX/77030; Shanghai Rui Jin Hosp,Shanghai Inst Hematol,Shanghai 200025//Peoples R China/

**Journal:** MOLECULAR AND CELLULAR BIOLOGY , 2004 , V 24 , N10 ( MAY ) , P 4465-4475

**ISSN:** 0270-7306 **Publication date:** 20040500

**Publisher:** AMER SOC MICROBIOLOGY , 1752 N ST NW, WASHINGTON, DC 20036-2904 USA

**Language:** English **Document Type:** ARTICLE ( ABSTRACT AVAILABLE )

**Identifiers--** ...ACUTE PROMYELOCYTIC LEUKEMIA; STAT3 SIGNALING PATHWAYS;  
PML-RAR-ALPHA; ACID RECEPTOR; LIVING CELLS; ANDROGEN RECEPTOR; TRANSLOCATION;  
PLZF; GENE; TRANSCRIPTION

2/3,K/10 (Item 1 from file: 71) [Links](#)

Fulltext available through: [Nature American, Inc. \(Publisher Group\)](#) [USPTO Full Text Retrieval Options](#)  
[SCIENCEDIRECT](#)  
[ELSEVIER BIOBASE](#)

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02986153 2005144680

**Erratum: Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF (Gene Therapy) (2005) vol. 12 (452-460) 10.1038/sj.gt.3302421)**

Buluwela L.; Pike J.; Mazhar D.; Kamalati T.; Hart S.M.; Al-Jehani R.; Yahaya H.; Patel N.; Sarwarl N.; Heathcote D.A.; Schwickerath O.; Phoenix F.; Hill R.; Aboagye E.; Shousha S.; Waxman J.; Lemoine N.R.; Zelent A.; Coombes R.C.; Ali S.

, United Kingdom

**Journal :** Gene Therapy , 12/10 (862) , 2005 , United Kingdom

**CODEN:** GETHE

**ISSN:** 0969-7128

**Document Type:** Erratum

**Languages:** English

**Erratum: Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF (Gene Therapy) (2005) vol. 12 (452-460) 10.1038/sj.gt.3302421)**

2/3,K/11 (Item 2 from file: 71) [Links](#)

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ELSEVIER BIOBASE

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02148053 2002228748

**Estrogen-dependent E2a/Pbx1 myeloid cell lines exhibit conditional differentiation that can be arrested by other leukemic oncoproteins**

Sykes D.B.; Kamps M.P.

**Address:** D.B. Sykes, Department of Molecular Pathology, University of California, San Diego School of Medicine, 9500 Gilman Dr, San Diego, CA 92093-0612 , United States

**Email:** dsykes@ucsd.edu

**Journal :** Blood , 98/8 (2308-2318) , 2001 , United States

**PUBLICATION DATE:** October 15, 2001

**CODEN:** BLOOA

**ISSN:** 0006-4971

**Document Type:** Article

**Languages:** English **Summary Languages:** English

**No. of References:** 76

...The cell lines were established by conditional immortalization of primary murine marrow progenitors with an **estrogen** -regulated E2a/Pbx1estrogen **receptor** fusion protein. Clones were identified that proliferated as immortalized blasts in the presence of **estrogen** , and that exhibited granulocytic, monocytic, or bipotential (granulocytic and monocytic) differentiation on **estrogen** withdrawal. Differentiation was normal and terminal as evidenced by morphology, cell surface markers, gene expression... ..differentiation of the cells could be arrested by heterologous oncoproteins including AML1/ETO, PML/RARalpha **PLZF**/RARalpha, Nup98/HoxA9, and other Hox proteins. Furthermore, the study examined the effects of cooperating...

2/3,K/12 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

EMBASE

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13882758 EMBASE No: 2006300624

**PLZF regulates Pbx1 transcription and Pbx1-HoxC8 complex leads to androgen-independent prostate cancer proliferation**

Kikugawa T.; Kinugasa Y.; Shiraishi K.; Nanba D.; Nakashiro K.-I.; Tanji N. ; Yokoyama M.; Higashiyama S.  
Dr. S. Higashiyama, Department of Biochemistry and Molecular Genetics, Ehime University School of Medicine,  
Shitsukawa, To-on, Ehime 791-0295 Japan

**Author Email:** shigeki@m.ehime-u.ac.jp

Prostate ( PROSTATE ) ( United States ) 01 JUL 2006 , 66/10 (1092-1099)

**CODEN:** PRSTD **ISSN:** 0270-4137 **eISSN:** 1097-0045

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 38

**BACKGROUND.** Promyelocytic leukemia zinc finger (**PLZF**) protein, a transcriptional repressor and negative regulator of the cell cycle, has been characterized as a prostatic **androgen**-responsive gene. DU145 cells show **androgen**-independent growth and lack **PLZF** gene expression. **METHODS.** We analyzed **PLZF**-regulating genes by DNA microarray using DU145 cells infected with LacZ- or **PLZF**-carrying adenoviruses. **RESULTS.** DNA microarray revealed that Pbx1 is a prominent suppressed gene in **PLZF**-overexpressing DU145 cells. **Androgen receptor (AR)**-expressing DU145 cells recovered **androgen**-dependent **PLZF** expression and subsequent repression of Pbx1 expression. Immunoprecipitation of Pbx1 in DU145 cells revealed a Pbx1-HoxC8 heterocomplex. siRNAs for Pbx1 and HoxC8 knocked down expression of each, and this suppressed **androgen**-independent cell growth. Double knockdown of both Pbx1 and HoxC8 suppressed cell growth much more significantly. **CONCLUSIONS.** **Androgen**-independent cell line DU145 cells lack **PLZF** gene expression, resulting in the upregulation of Pbx1 and HoxC8 expression. The Pbx1-HoxC8 heterocomplex may lead to **androgen**-independent growth in prostate cancer. (c) 2006 Wiley-Liss, Inc.

2/3,K/13 (Item 1 from file: 144) Links

Pascal

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17733282 PASCAL No.: 06-0327020

PLZF regulates pbx1 transcription and Pbx1 - HoxC8 complex leads to androgen-independent prostate cancer proliferation

KIKUGAWA Tadahiko; KINUGASA Yumi; SHIRAISHI Ken; NANBA Daisuke  
; NAKASHIRO Koh-Ichi; TANJI Nozomu; YOKOYAMA Masayoshi; HIGASHIYAMA Shigeki

Department of Biochemistry and Molecular Genetics, Ehime University School of Medicine, Shitsukawa, To-on, Ehime, Japan; Department of Urology, Ehime University School of Medicine, Shitsukawa, To-on, Ehime, Japan; Department of Oral and Maxillofacial Surgery, Ehime University School of Medicine, Shitsukawa, To-on, Ehime, Japan; Information and Cell Function, PRESTO, JST, Japan

Journal: The Prostate, 2006  
, 66 (10) 1092-1099  
Language: English

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**BACKGROUND.** Promyelocytic leukemia zinc finger (**PLZF**) protein, a transcriptional repressor and negative regulator of the cell cycle, has been characterized as a prostatic **androgen**-responsive gene. DU145 cells show **androgen**-independent growth and lack **PLZF** gene expression. **METHODS.** We analyzed **PLZF** -regulating genes by DNA microarray using DU145 cells infected with LacZ- or **PLZF**-carrying adenoviruses. **RESULTS.** DNA microarray revealed that Pbx1 is a prominent suppressed gene in **PLZF**-overexpressing DU145 cells. **Androgen receptor (AR)**-expressing DU145 cells recovered **androgen**-dependent **PLZF** expression and subsequent repression of Pbx1 expression. Immunoprecipitation of Pbx1 in DU145 cells revealed a Pbx1-HoxC8 heterocomplex. siRNAs for Pbx1 and HoxC8 knocked down expression of each, and this suppressed **androgen** -independent cell growth. Double knockdown of both Pbx1 and HoxC8 suppressed cell growth much more significantly. **CONCLUSIONS.** **Androgen** -independent cell line DU145 cells lack **PLZF** gene expression, resulting in the upregulation of Pbx1 and HoxC8 expression. The Pbx1 -HoxC8 heterocomplex may lead to **androgen**-independent growth in prostate cancer.

2/3,K/14 (Item 2 from file: 144) Links

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16657020 PASCAL No.: 04-0308161

Identification and characterization of PLZF as a prostatic androgen-responsive gene

FENG JIANG; ZHOU WANG

Department of Urology, Northwestern University, Chicago, Illinois, United States; Department of Molecular Pharmacology and Biological Chemistry, and The Robert H. Lurie Comprehensive Cancer Center, Feinberg School of Medicine, Northwestern University, Chicago, Illinois, United States

Journal: The Prostate, 2004

, 59 (4) 426-435

Language: English

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**BACKGROUND.** Promyelocytic leukemia zinc finger protein (**PLZF**) was initially identified by virtue of its fusion with RARa as a result of a...

... 17) chromosomal translocation that occurs in a small subset of acute promyelocytic leukemia (APL) patients. **PLZF** has been reported to have pro-apoptotic and anti-proliferative activity both in vivo and in vitro. **METHODS.** Using a modified subtractive hybridization, we identified **PLZF** as an **androgen**-responsive gene in the rat ventral prostate. Northern blot and Western blot were used to characterize the regulation of **PLZF** by androgens in LNCaP cells. Stable transfections of **PLZF** in LNCaP cells were performed to assay the effect of **PLZF** overexpression on LNCaP cell proliferation. **RESULTS.** **PLZF** mRNA was transiently up-regulated by androgens in the regressed ventral prostate of castrated adult rat. **PLZF** was also up-regulated by androgens, at both mRNA and protein levels, in the **androgen**-responsive human prostate cancer cell line LNCaP. **Androgen** induction of **PLZF** mRNA was not inhibited by protein synthesis inhibitor cycloheximide but inhibited by **androgen receptor** antagonist bicalutamide, indicating that **PLZF** is a direct **androgen**-responsive gene. To study the functions of **PLZF** in **androgen** action, LNCaP sublines stably overexpressing **PLZF** were generated. **PLZF** overexpression inhibited LNCaP proliferation either in the presence or absence of **androgen**, which is consistent with the reported anti-proliferative activity of **PLZF**. **CONCLUSIONS.** The above observations indicate that **PLZF** is an **androgen**-responsive gene with anti-proliferative activity in prostate cancer cells.

2/3,K/15 (Item 1 from file: 266) [Links](#)

FEDRIP

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00492843

**Identifying No.:** 137839 ; 0004; 586 **Agency Code:** VA

**Dimerization and Dominant Negative Activity of Verb-A**

**Principal Investigator:** Subauste, Jose S., M.D.

**Performing Org.:** Department of Veterans Affairs, Medical Center Jackson, MS

**Sponsoring Org.:** Department of Veterans Affairs, Research and Development (15) , 810 Vermont Ave. N.W. ,  
Washington , D.C. 20420 United States of America

**Dates:** 20001214

**Summary:** ...blotting, Western blotting, generation and characterization of transgenic mice.

CLINICAL RELEVANCE: Mutant forms of nuclear **receptors** have been implicated in a variety of endocrine and neoplastic diseases seen in VA patients, including mutations in TR? and the generalized thyroid hormone resistance syndrome, mutations in the **androgen receptor** and **androgen** resistance syndrome, PML-RAR and **PLZF-RAR** fusion proteins and promyelocytic leukemia, ETO fusion protein and acute myelogenous (M2) leukemia, mutations in the **estrogen receptor** and hormone resistant breast cancers, mutations in the **androgen receptor** and prostate cancer, mutations in thyroid hormone **receptor** and hepatocellular carcinoma. In the majority of these cases, the mutant **receptor** appears to function as a dominant negative form inducing the disease by interfering with the action of the normal **receptor** counterpart. Therefore investigation of v-erbA may lead to important findings that can be applied ...

2/3,K/16 (Item 1 from file: 357) [Links](#)

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Derwent Biotech Res.

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0364779 DBA Accession No.: 2005-10483

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF method of mamma carcinoma gene therapy involving gene transfer of an estrogen receptor fusion protein**

**Author:** BULUWELA L; PIKE J; MAZHAR D; KAMALATI T; HART SM; AL-JEHANI R; YAHAYA H; PATEL N; SARWARL N; HEATHCOTE DA; SCHWICKERATH O; PHOENIX F; HILL R; ABOAGYE E; SHOUSHA S; WAXMAN J; LEMOINE NR; ZELENT A; COOMBES RC; ALI S

**Corporate Affiliat :** Univ London Imperial Coll Sci Technol and Med Univ London Imperial Coll Sci Technol and Med; Univ London; Inst Canc Res

**Corporate Source:** Buluwela L, Univ London Imperial Coll Sci Technol and Med, Dept Canc Med, Du Cane Rd, London W12 0NN, England

**Journal:** GENE THERAPY ( 12, 5, 452-460 ) 2005

ISSN: 0969-7128

Language: English

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-alpha and the transcriptional repressor PLZF method of mamma carcinoma gene therapy involving gene transfer of an estrogen receptor fusion protein**

**Abstract:** AUTHOR ABSTRACT - Estrogen receptor alpha (ERalpha) is a ligand-inducible transcription factor that acts to regulate gene expression by binding to palindromic DNA sequence, known as the estrogen response element, in promoters of estrogen-regulated genes. In breast cancer ERalpha plays a central role, where estrogen-regulated gene expression leads to tumor initiation, growth and survival. As an approach to silencing estrogen-regulated genes, we have studied the activities of a fusion protein between ERalpha and the promyelocytic leukemia zinc-finger (PLZF) protein, a transcriptional repressor that acts through chromatin remodeling. To do this, we have developed lines from the estrogen-responsive MCF-7 breast cancer cell line in which the expression of the fusion protein PLZF-ERalpha is conditionally regulated by tetracycline and shows that these feature long-term silencing of the expression of several well-characterized estrogen-regulated genes, namely pS2, cathepsin-D and the progesterone receptor. However, the estrogen-regulated growth of these cells is not inhibited unless PLZF-ERalpha expression is induced, an observation that we have confirmed both in vitro and in vivo. Taken together, these results show that PLZF-ERalpha is a potent repressor of estrogen-regulated gene expression and could be useful in distinguishing estrogen-regulated genes required for the growth of breast cancer cells. (9 pages)



2/3,K/17 (Item 2 from file: 357) [Links](#)

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Derwent Biotech Res.

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0357546 **DBA Accession No.:** 2005-03250

**Silencing of androgen-regulated genes using a fusion of AR with the PLZF transcriptional repressor  
androgen-regulated protein gene silencing using transcription repressor for gene therapy**

**Author:** PIKE J; HOLMES D; KAMALATI T; DAVIES D; TOLHURST R; MAZHAR D; FISHPOOL S;  
AL-JEHANI R; WAXMAN J; ZELEN A; LEMOINE NR; ALI S; BULUWELA L

**Corporate Affiliate:** Univ London Imperial Coll Sci Technol and Med Canc Res UK Inst Canc Res

**Corporate Source:** Ali S, Univ London Imperial Coll Sci Technol and Med, Dept Canc Med, Du Cane Rd, London W12 0NN, England

**Journal:** ONCOGENE ( 23, 45, 7561-7570 ) 2004

**ISSN:** 0950-9232

**Language:** English

**Abstract:** AUTHOR ABSTRACT - The **androgen receptor** (AR) is a member of the nuclear **receptor** superfamily of ligand-activated transcription factors and plays a key role in the development and... ..regulated genes, based on the properties of the transcriptional repressor promyelocytic leukemia zinc-finger protein ( **PLZF**). In order to do this, we have made a fusion protein between **PLZF** and AR, named **PLZF-AR**, and show that **PLZF-AR** is able to bring about silencing of genomically encoded AR-regulated genes and inhibit the **androgen**-regulated growth of LNCaP prostate cancer cells. Together, our results show that this strategy is...

2/3,K/18 (Item 3 from file: 357) [Links](#)

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0309775 DBA Accession No.: 2003-11560 PATENT

**Suppressing the expression of a selected endogenous gene in a eukaryotic cell, useful in medicine, comprises introducing into the cell a molecule comprising a nucleic acid binding portion or a polynucleotide encoding the molecule vector-mediated histone deacetylation complex or promyelocytic leukemia zinc finger N-CoR- or SMRT-binding domain gene transfer and expression in host cell for gene therapy**

**Author:** BULUWELA L; HOLMES D; KAMALATI T; WAXMAN J; ALI S

**Patent Assignee:** GENE EXPRESSION TECHNOLOGIES LTD 2003

**Patent Number:** WO 2003010308 **Patent Date:** 20030206 **WPI Accession No.:** 2003-248079 ( 200324 )

**Priority Application Number:** GB 200117964 **Application Date:** 20010724

**National Application Number:** WO 2002GB3336 **Application Date:** 20020719

**Language:** English

**Abstract:** ...b) all or a N-CoR- or SMRT-binding part of promyelocytic leukemia zinc finger (**PLZF**); or (c) an enzymatically active part of a HDAC. The component of the HDAC complex... ..that binds to or facilitates the recruitment of a HDAC complex is any one of **PLZF**, N-CoR, SMRT, Sin3, SAP18, SAP30, or HDAC. The nucleic acid binding portion is a... ..plant or animal genome; (d) all or a DNA binding part of a steroid hormone **receptor** protein or other nuclear **receptor** DNA binding protein; or (e) all or a DNA-binding portion of **estrogen receptor** (ER) or all or a DNA-binding portion of **androgen receptor** (AR). The method further comprises exposing the cell to the ligand. The binding of the... ..and ligand binding portion are derivable from different polypeptides, e.g. from different steroid hormone **receptors**. Suppressing the expression of a selected gene in a eukaryotic cell comprises introducing into the... ..plant cell. **ACTIVITY** - Cytostatic; Virucide; Anti-HIV. A retroviral vector was produced which encodes a **PLZF-ER** or **PLZF-AR-ER** fusion protein. Following packaging, the recombinant retrovirus was transduced into breast cancer cells in situ and **estrogen receptor**-mediated transcription was suppressed selectively in breast cells. The retroviral vector was administered into the site of breast tumor. Retroviral RNA was taken up by the breast cancer cells and **estrogen receptor**-mediated transcription was suppressed selectively in breast cells. **MECHANISM OF ACTION** - ...genes such as HIV. **EXAMPLE** - MCF7-Tet Off line JP23 cells were seeded in an **estrogen** free-media containing doxytetracycline (TET, 1 micro-g/ml) and maintained for 2 days. Cell culture media were then altered so that **estrogen** -regulated growth could be assessed in the presence (no TET) and absence (with TET) of promyelocytic leukemia zinc finger (**PLZF**)- **estrogen receptor** (ER). **Estrogen** regulated growth was inhibited in JP23 cells in the presence of **PLZF-ER** expression. Cells expressing **PLZF-ER** for 4 days were re-treated with TET and under these conditions **PLZF-ER** expression was lost within 24 hours. Over the remaining 5 days of the assay, the cells showed little growth indicating a greatly reduced growth response to **estrogen**. (89 pages)

2/3,K/19 (Item 1 from file: 399) [Links](#)

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143400696 CA: 143(22)400696b JOURNAL

**Inhibiting estrogen responses in breast cancer cells using a fusion protein encoding estrogen receptor-.alpha. and the transcriptional repressor PLZF. (Erratum to document cited in CA142:387094)**

**Author:** Buluwela, L.; Pike, J.; Mazhar, D.; Kamalati, T.; Hart, S. M.; Al-Jehani, R.; Yahaya, H.; Patel, N.; Sarwarl, N.; Heathcote, D. A.; Schwickerath, O.; Phoenix, F.; Hill, R.; Aboagye, E.; Shousha, S.; Waxman, J.; Lemoine, N. R.; Zelent, A.; Coombes, R. C.; Ali, S.

**Location:** Department of Cancer Medicine, Imperial College London, London, UK,

**Journal:** Gene Ther.

**Date:** 2005

**Volume:** 12 **Number:** 10 **Pages:** 862

**CODEN:** GETHEC

**ISSN:** 0969-7128

**Language:** English

**Publisher:** Nature Publishing Group

2/3,K/20 (Item 2 from file: 399) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

CA SEARCH(R)

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140000921 CA: 140(1)921k JOURNAL

**Specific regulation of lipocalin-type prostaglandin D synthase in mouse heart by estrogen receptor .beta.**

**Author:** Otsuki, Michio; Gao, Hui; Dahlman-Wright, Karin; Ohlsson, Claes; Eguchi, Naomi; Urade, Yoshihiro; Gustafsson, Jan-Ake

**Location:** Department of Biosciences at Novum, Karolinska Institutet, SE-14157, Huddinge, Swed.

**Journal:** Mol. Endocrinol.

**Date:** 2003

**Volume:** 17 **Number:** 9 **Pages:** 1844-1855

**CODEN:** MOENEN

**ISSN:** 0888-8809

**Language:** English

**Publisher:** Endocrine Society

2/3,K/21 (Item 3 from file: 399) [Links](#)

CA SEARCH(R)

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134096209 CA: 134(8)96209j PATENT

**Suppression of gene expression using fusion proteins of DNA-binding and chromatin inactivation domains**

**Inventor (Author):** Buluwela, Lakjaya; Ali, Simak

**Location:** UK,

**Assignee:** Imperial College Innovations Limited

**Patent:** PCT International ; WO 200102019 A2 **Date:** 20010111

**Application:** WO 2000GB2497 (20000628) \*GB 9915126 (19990630)

**Pages:** 65 pp.

**CODEN:** PIXXD2

**Language:** English

**Patent Classifications:**

**Class:** A61K-048/00A

**Designated Countries:** AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CR; CU; CZ; DE; DK; DM; DZ; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

**Designated Regional:** GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG

2/3,K/22 (Item 1 from file: 35) [Links](#)

Dissertation Abs Online

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02020026 ORDER NO: AADAA-I3132545

**Mechanism of androgen action in the prostate: Identification and analysis of androgen-responsive genes**

**Author:** Jiang, Feng

**Degree:** Ph.D.

**Year:** 2004

**Corporate Source/Institution:** Northwestern University ( 0163 )

**Source:** Volume 6505B of Dissertations Abstracts International.

PAGE 2244 . 159 PAGES

Androgens are required for the structural and functional integrity of the prostate. **Androgen** action is intimately involved in the pathogenesis of two major prostate diseases, benign prostatic hyperplasia (BPH) and prostate carcinoma (CaP). Androgens regulate gene expression in the prostate through the **androgen receptor** (AR), a ligand-dependent transcription factor. To understand the molecular and cellular mechanisms of **androgen** action in the prostate, I used both cDNA subtractive hybridizations and microarray to comprehensively identify ...  
...trafficking, secretions, cell cycle and apoptosis, and structural and extracellular proteins. I have characterized four **androgen** -responsive genes: FPPS, **PLZF**, GADD45&gamma;, and U19. FPPS is abundantly expressed and regulated by androgens in the rat prostatic epithelial cells. Both **PLZF** and GADD45&gamma; are found to be growth-suppressive to prostate cancer cells, suggesting that androgens might activate a signaling pathway to counteract the **androgen** -induced cell proliferation pathway. U19, a novel **androgen** -responsive apoptosis inducer, is also growth-suppressive to prostate cancer. Therefore, U19 was chosen for... ..activity of U19. In conclusion, my thesis established a foundation for future mechanistic study of **androgen** action and provided new insights into the roles played by androgens in the prostate.